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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,542	12/18/2006	Philip Caunt	GJE.7273T	5864

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EXAMINER

HUANG, CHENG YUAN

ART UNIT	PAPER NUMBER
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1787

NOTIFICATION DATE	DELIVERY MODE
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10/15/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/566,542	Applicant(s) CAUNT ET AL.	
	Examiner CHENG HUANG	Art Unit 1787	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 14 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-4, 6-10, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caselli et al. (EP 1146111) in view of Stevens (U.S. Patent No. 5,712,237) and Scheuing et al. (U.S. Patent Application Publication No. 2003/0220223).

4. Regarding claims 1 and 14, Caselli et al. teaches a composition for disinfecting a space (See Abstract) comprising one or more essential oils or essential oil components (paragraph [0033]), and a mixture of volatile and non-volatile solvents (paragraphs [0023], [0110], and [0124]) absorbed on a carrier (paragraph [0139]).

5. Caselli et al. fails to teach the claimed percent weight ratio of volatile to non-volatile solvent.

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6. However, Stevens teaches a composition (See Title) comprising a mixture of volatile and non-volatile solvents, wherein the claimed percent weight ratio of volatile to non-volatile solvent is in the range of 50:3 to 1:15 (col. 6, lines 30-35, col. 10, lines 50-52), which encompasses the claimed range of 3:1 to 1:3.

7. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose a percent weight ratio, including those claimed, for the volatile to non-volatile solvents of Caselli et al. to control the distillation, compatibility, likelihood of forming azeotropes with other cosolvents, solubility with hydrophilic stains and contaminants, and cost (Stevens, col. 6, lines 24-30, col. 10, lines 56-67).

8. Caselli et al. fails to teach the claimed carrier material.

9. However, Scheuing et al. teaches a composition for disinfecting a space (paragraph [0042]) wherein carrier is a non-woven material and the non-woven carrier is a combination of cellulose and polypropylene (paragraph [0072]).

10. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose a non-woven cellulose and polypropylene combination for the carrier of Caselli et al. as modified by Stevens as an effective absorbent material (Scheuing et al. paragraphs [0070]-[0074]).

11. Regarding the limitation that the composition is for disinfecting a space and “vapor-producing” as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that “if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention’s limitations, then

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the preamble is not considered a limitation and is of no significance to claim construction”.

Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

12. It is the examiner’s position that the preamble does not state any distinct definition of any of the claimed invention’s limitations and further that the purpose or intended use, i.e. “vapor-producing” or “for disinfecting a space”, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art composition and further that the prior art structure which is a composition identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

13. Regarding claims 2, 3, and 6, Caselli et al. teaches wherein the essential oil component is cinnamic aldehyde, cinnamic alcohol, and/or cinnamon oil (paragraph [0036]).

14. Regarding claim 4, Caselli et al. teaches wherein the essential oil component is eugenol (paragraph [0047]).

15. Regarding claims 7 and 8, Caselli et al. teaches wherein the volatile solvent is an alcohol and wherein the alcohol is isopropanol (paragraph [0124]).

16. Regarding claim 9, Caselli et al. teaches wherein the non-volatile solvent is water (paragraph [0023]) .

17. Regarding claim 10, Caselli et al. teaches wherein the non-volatile solvent is glycol (paragraph [0111]).

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18. Regarding claim 18, while Caselli et al. as modified by Stevens and Scheuing et al. does not disclose the size limitation as claimed, it is noted that limitations relating to size are not sufficient to patentably distinguish the present invention over the prior art. Furthermore, given that the structural laminate of Caselli et al. as modified by Stevens and Scheuing et al. would not perform differently than that claimed, the claimed structural laminate is not patentably distinctly from that of Caselli et al. as modified by Stevens and Scheuing et al., given that the courts have held that where the only difference between the prior art and the claims is a recitation of relative dimensions, there is no patentable distinction between the claims and the prior art (see MPEP 2144.04 IVA). Finally, it is noted one of ordinary skill would easily recognize the composite of the prior art could be sized to fulfill a desired end use.

19. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caselli et al. (EP 1146111) in view of Stevens (U.S. Patent No. 5,712,237) and Scheuing et al. (U.S. Patent Application Publication No. 2003/0220223), and further, in view of Julemont et al. (U.S. Patent No. 6,380,152)

20. Caselli et al. as modified by Stevens and Scheuing et al. is relied upon as disclosed above.

21. Caselli et al. as modified by Stevens and Scheuing et al. fails to disclose wherein the essential oil component is tea tree oil.

22. However, Julemont et al. teaches a composition (col. 1, lines 56) comprising one or more essential oils (col. 2, line 48-col. 3, line 30) wherein the essential oil is tea tree oil (col. 3, line 3) and wherein the composition is absorbed on a carrier (col. 1, lines 48-51).

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23. Given that Julemont et al. teaches essential oils including those of anise, clove, aniseed, lemongrass, lemon, lavender, and tea tree oil (col. 2, line 48-col. 3, line 30) and given that Caselli et al. teaches essential oils including those of anise, clove, aniseed, lemongrass, lemon, and lavender that act as proteins denaturing agents to exhibit antimicrobial activity and contribute to the safety profile when used to disinfect any surface, and impart pleasant odor to a composition without the need of adding a perfume, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute one of the essential oils in the composition of Caselli et al. as a known functional equivalent of tea tree oil. Substitution of known components with other components that yield predictable results would have been obvious to one of ordinary skill in the art since predictable characteristics such as antimicrobial activity that may be used to disinfect surfaces. See MPEP 2144.06 II.

24. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caselli et al. (EP 1146111) in view of Stevens (U.S. Patent No. 5,712,237) and Scheuing et al. (U.S. Patent Application Publication No. 2003/0220223), and further, in view of McCue et al. (U.S. Patent No. 5,403,587).

25. Caselli et al. as modified by Stevens and Scheuing et al. is relied upon as disclosed above.

26. Caselli et al. as modified by Stevens and Scheuing et al. fails to teach wherein the non-volatile solvent is a glycol wherein the glycol is (mono)propylene glycol.

27. However, McCue et al. teaches wherein the non-volatile solvent is a glycol wherein the glycol is (mono)propylene glycol (col. 4, lines 15-16).

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28. It would have been obvious to one of ordinary skill in the art at the time of the invention to include (mono)propylene glycol as the glycol of Caselli et al. as a solubilizing and dispersing agent (McCue et al., col. 4, lines 4-11).

29. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caselli et al. (EP 1146111) in view of Stevens (U.S. Patent No. 5,712,237) and Scheuing et al. (U.S. Patent Application Publication No. 2003/0220223), and further, in view of Caunt et al. (EP 0965541)

30. Caselli et al. as modified by Stevens and Scheuing et al. is relied upon as disclosed above.

31. Caselli et al. as modified by Stevens and Scheuing et al. fails to teach wherein the carrier is amorphous silicon dioxide.

32. However, Caunt et al. teaches an antimicrobial a composition with a carrier of amorphous silicon dioxide (paragraphs [0001] and [0009]).

33. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose the carrier of Caselli et al. as modified by Stevens and Scheuing et al. to be amorphous silicon dioxide for anti-microbial properties (Caunt et al., paragraph [0009]).

34. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caselli et al. (EP 1146111) in view of Stevens (U.S. Patent No. 5,712,237) and Scheuing et al. (U.S. Patent Application Publication No. 2003/0220223), and further, in view of Hartman et al. (U.S. Patent Application Publication No. 2005/0106121).

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35. Caselli et al. as modified by Stevens and Scheuing et al. is relied upon as disclosed above.

36. Caselli et al. as modified by Stevens and Scheuing et al. fails to teach wherein the carrier is a self-adhesive item or label.

37. However, Hartman et al. teaches a composition for disinfecting a space (paragraph [0016]) wherein the carrier is a self-adhesive item or label (paragraphs [0063] and [0065]).

38. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose a self-adhesive item or label for the carrier of Caselli et al. as modified by Stevens and Scheuing et al. for generating desirable amounts of chlorine dioxide gas over a desirable period of time when exposed to water or water vapor to prevent or retard microbial growth within an atmosphere or within an enclosure for a sustained period of time and, therefore, be utilized to control microbial growth on items contained in a package (paragraphs [0016] and [0075]).

Response to Arguments

39. Applicant's arguments filed 13 September 2010 have been fully considered but they are not persuasive.

40. Applicants argue that, with regards to Stevens, "no mention is made of any use of the composition for disinfection purposes...".

41. However, applicants' are reminded that according to MPEP 2141.01 (a), a reference may be relied on as a basis for rejection of an applicants' invention if it is "reasonably pertinent to the particular problem with which the inventor is concerned." A reasonably pertinent reference is further described as one which "even though it maybe in a different field of endeavor, it is one

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which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." Stevens is, therefore, a reasonably pertinent reference, because it teaches compositions on fabrics to control the distillation, compatibility, likelihood of forming azeotropes with other cosolvents, solubility with hydrophilic stains and contaminants, and cost, which is a function especially pertinent to the invention at hand.

42. Applicants argue that, with regards to Scheuing et al., "in contrast, the currently claimed composition, not the carrier, acts as the anti-microbial, disinfecting agent; the carrier onto which the claimed composition is absorbed, is a separate entity independent from the anti-microbial composition" and Scheuning does not disclose claimed anti-microbial agents.

43. However, note that while Scheuing et al. does not disclose all the features of the present claimed invention, Scheuing et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely compositions on fabrics comprising a carrier that is a non-woven material and the non-woven carrier is a combination of cellulose and polypropylene, and in combination with the primary reference, discloses the presently claimed invention. Further, there is nothing in the claims that exclude the carrier from being anti-microbial, in addition to the composition also.

44. Applicants argue that, "there is no reason, other than hindsight gleaned from the current invention, to combine the reference teachings to arrive at the current invention".

45. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on

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obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Further, it is the examiner's position that the rejection is not based on hindsight but rather on motivation to combine found in the references themselves.

46. Applicants argue that “the range of alcohol to water ratio of 50:3 to 1:15 is extremely broad” and “there is no reason for a skilled artisan to only select the currently claimed range of 3:1 to 1:3 from the broad disclosure of 50:1 to 1: 15”.

47. However, as set forth in MPEP 2144.05, in the case where the claimed range “overlap or lie inside ranges disclosed by the prior art”, a *prima facie* case of obviousness exists, *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Further, while the range disclosed by the reference is broader than that claimed, the fact remains that there is overlap. It would have been obvious to one of ordinary skill in the art, absent evidence to the contrary, to choose a ratio, including that presently claimed.

48. Applicants argue that “the claimed ratio of volatile to non-volatile solvent in the range of 3:1 to 1:3 provides unexpectedly significant improvements on anti-bacterial effects over the prior art ranges”. Applicants point to the third and fourth rows of Table 3 in Applicants' Specification.

49. However, as set forth in MPEP 716.02(d), whether unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, “objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to

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support”. In other words, the showing of unexpected results must be reviewed to see if the results occurred over the entire claimed range, *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980). Applicants have not provided data to show that the unexpected results do in fact occur over the entire claimed range of 3:1 to 1:3 at 6 and 8 weeks. Further, that data is not persuasive given that it is not commensurate in the scope with the present claims given that the examples utilize specific solvents of iso-propanol and monopropylene glycol and specific essential oils while the claims broadly recite "volatile and non-volatile solvents" and "essential oils or essential oil components". Further, the data is not persuasive given that for at least 4 weeks, the results were the same (all negative) and there is no disclosure in the claims regarding time.

50. Applicants argue that with regards to Scheuing et al., "paragraphs 0072-0074 merely teach that cleaning wipes can be made from non-woven as well as woven material. It is does not teach or suggest using a non-woven material as a carrier, onto which a composition for disinfecting a space can be absorbed".

51. However, the fact remains that Scheuing et al. still teaches non-woven material.

Conclusion

52. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

53. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

54. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHENG YUAN HUANG whose telephone number is (571) 270-7387. The examiner can normally be reached on Monday-Thursday from 8 AM to 4 PM.

55. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho, can be reached at 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

56. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. H./

Cheng Yuan Huang

Examiner, Art Unit 1787

October 5, 2010

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1787